

Council Audit Recommendations and Executive Response

Finding 1: Management of the Brightwater Treatment Plant contract amendments was not consistent with county policies or industry best practices for effectively controlling project costs.

The Executive acknowledges that management of contract amendments needs to be improved to ensure full compliance with policies and procedures. The Wastewater Treatment Division (WTD) has already implemented procedures to strengthen documentation and compliance. However, WTD did perform either critical reviews or independent estimates for negotiation of all contract amendments, and although negotiations records are not complete, it is fully documented that WTD negotiated \$10.5 million in cost reductions to the contract amendments reviewed by the Council Auditor.

The Council Auditor's report stated that design costs for the Brightwater Treatment Plant exceeded industry standards. Based on WTD's review of the methodology cited in the reference documents, the calculation methodology utilized by the Auditor does not provide an *apples-to-apples* comparison. The Milwaukee Metropolitan Sewerage District (MMSD) report cited by the Auditor compared design costs to **total program costs**. The Auditor calculation used only **construction cost**, which resulted in an overstatement of Brightwater's design costs percentages. Using MMSD methodology, the design cost for Brightwater is 9.2 percent of the total project costs or 10.7 percent of the total project cost if land costs are removed. This is within the six to 12 percent range identified as the industry average.

Significant changes were made to the design of the treatment plant to reduce cost, which resulted in the need for additional engineering. Rapid escalation of construction commodity prices was the primary driver behind the need to perform extensive value engineering reviews to mitigate construction cost increases and to deliver the project.

Concur

- The Wastewater Treatment Division (WTD) has initiated changes to improve the project file documentation.

The Executive will assess the existing county policies and management controls and propose refinements that are reasonable and appropriate to meet the needs of unique large-scale projects. Changes to the design to implement value engineering have resulted in more than \$86 million in construction cost reductions, while maintaining the project schedule.

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Recommendation	Executive Response	Schedule for Implementation	Comments
<p><u>Recommendation 1:</u></p> <p>WTD project management should adhere to all county policies and procedures for managing capital project contract amendments, particularly requirements to document independent cost estimates or critical reviews for additional or revised design work and develop detailed records of negotiations. Design changes should be identified by project tasks along with cost and schedule impacts.</p>	<p><u>Concur</u></p> <ul style="list-style-type: none"> • The Wastewater Treatment Division (WTD) has initiated changes to improve the project file documentation. • The Executive will assess the existing county policies and management controls and propose refinements that are reasonable and appropriate to meet the needs of unique large-scale projects. 	<p>The Interdepartmental Forum on Procurement will draft appropriate revisions to county policies and procedures by the second quarter 2007.</p>	
<p><u>Recommendation 2:</u></p> <p>WTD project management should submit amendments with cost estimates that exceed \$150,000 to the central Project Control Officer (PCO) for review and recommendations. Amendments with costs that individually or cumulatively exceed 10 percent of the original design contract value should be submitted to the department director for review and approval.</p>	<p><u>Partially concur</u></p> <ul style="list-style-type: none"> • The Executive branch will initiate a review and clarification of threshold requirements for county contracts. • WTD will submit all applicable amendments over \$150,000 for PCO review pending a formal 	<p>Review and clarify threshold for review of contract amendments by fourth quarter 2007 as part of the work program for the Interdepartmental Forum on Procurement.</p> <p>Implemented.</p>	<p>The audit revealed that WTD had different interpretations of the policy with regard to the \$150,000 threshold for amendment reviews by the Finance Division's central PCO.</p>

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	<p>review and clarification of the threshold in Executive policy and procedures.</p> <ul style="list-style-type: none"> The Executive branch believes WTD met the obligation for informing the department director of significant cost changes; however, the Executive agrees that documents related to such processes could be improved and associated procedures clarified. WTD has already initiated draft forms and is currently preparing associated procedures revisions. 	Third quarter 2006.	
<p><u>Recommendation 3:</u></p> <p>The Department of Natural Resources and Parks and WTD management should ensure that new or revised design work does not proceed without fully executed and authorized contract amendments, consistent with county and WTD requirements. Contracts should not be amended to include work that is outside the original contract scope and contract budget in advance of securing additional</p>	<u>Concur</u>	Implemented. Follow-up work on the <i>delegation of authority</i> topic will be addressed as part of Recommendation 4.	WTD recognizes that work has been authorized to proceed without a fully executed amendment, but has not done any work without securing additional budget or appropriation authority.

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budget or appropriation authority.			
<p><u>Recommendation 4:</u></p> <p>The Procurement and Contract Services Section, in cooperation with the Department of Natural Resources and Parks and WTD management, should assess current county policies in relation to unique large-scale capital projects to ensure their reasonableness and to promote consistent compliance by county agencies. Particular attention should be given to adequate delegation of approval authority to ensure critical project schedules can be met while maintaining public accountability.</p> <p>County policies related to central project control officer review of contract amendments greater than \$150,000 should also be clarified to avoid confusion among implementing agencies.</p>	<p><u>Concur</u></p> <p>The Executive branch will direct the departments of Finance and Natural Resources and Parks to collaborate on the development of a <i>delegation of authority</i> proposal that will address critical project schedules while remaining consistent with best business practices.</p>	<p>The Interdepartmental Forum on Procurement will draft revisions to county policies and procedures by first quarter 2007, with focus on the delegation of approval authority.</p> <p>The clarification of existing county policies for contract amendments greater than \$150,000 will take place as part of responding to Recommendation 2, above.</p>	

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<p>Finding 2: The contracting methods selected for the Brightwater Treatment Plant final design services contributed to higher design costs.</p>	<p>WTD used a lump sum method of contracting for design services and a general contractor/construction management (GC/CM) methodology for construction/construction management. These contracting methods were selected because of their potential benefit to meet the challenges associated with completing large complex capital projects on schedule and within budget. While, there are some <i>lessons learned</i>, both are appropriate for this project and have provided numerous project benefits.</p> <p>As noted above, record increases in the cost of construction commodity prices occurred during the design phase requiring extensive value engineering and redesign to manage the construction costs. High environmental and community interest in Brightwater, in addition to new permitting requirements such as the need to perform extensive seismic investigations, also required significant design modifications. The county's use of the GC/CM to provide construction input during the design phase, while adding cost, has resulted in significant construction cost reductions as its input has been incorporated into the design, rather than appearing as change orders or additional construction cost. It is anticipated that the amount invested in design will result in higher quality, lower construction costs, and fewer changes during construction. The value engineering savings of more than \$86 million could not have been achieved without the GC/CM's involvement.</p> <p>The external influences and pressures experienced on this project, resulting in significant scope changes during the design phase, would have required contractual revisions and amendments regardless of the contracting method employed.</p>		
Recommendation	Executive Response	Schedule for Implementation	Comments
<p><u>Recommendation 5:</u></p> <p>WTD, in collaboration with the Procurement and Contract Services Section, should ensure that design to construction budget and stop work provisions are included in future professional engineering services contracts to avoid</p>	<p><u>Partially concur</u></p> <ul style="list-style-type: none"> • <i>Design to construction budget and stop work provisions</i> are contracting management options that should be <i>considered</i> in the development of professional engineering services contracts. 	<p>The Interdepartmental Forum on Procurement will draft new contract clauses for county-wide use along with guidelines by second quarter 2007.</p>	

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unnecessary design costs.	<ul style="list-style-type: none"> The Executive will direct the Interdepartmental Forum on Procurement to assess current guidelines and prepare new contract language and guidelines for the most effective contract management provisions, including <i>design to construction budget</i> and <i>stop work</i> provisions. The new guidelines will address how the provisions should be applied to various types of contracts and projects. 		
<p><u>Recommendation 6:</u></p> <p>WTD should ensure that the Phase IV construction engineering services contract and the GC/CM construction contracts contain distinct and clearly defined roles and responsibilities and do not overlap with the role and responsibilities of CDM. The contracts should also address important communication issues, including dispute resolution issues, to ensure continued collaboration in achieving the Brightwater project quality, cost, and schedule objectives.</p>	<p><u>Concur</u></p> <ul style="list-style-type: none"> In response to a similar recommendation from the council's Oversight Management Consultant, R. W. Beck, in June 2005, WTD has developed a clear matrix of responsibilities and communication protocols for all contracts on the Brightwater project. 	Complete.	

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<p><u>Recommendation 7:</u></p> <p>The Procurement and Contract Services Section should develop guidelines for the use of GC/CM contracting methods that maximize opportunities to design and construct capital projects cost-effectively. WTD should provide input in the development of the GC/CM guidelines based upon lessons learned in designing and constructing the Brightwater project and other complex, large-scale capital projects.</p>	<p><u>Concur</u></p> <ul style="list-style-type: none"> WTD will prepare a <i>lessons learned</i> review of the GC/CM contracting process for Brightwater and the Executive will appoint an internal task force to develop guidelines for using GC/CM on future county projects. 	<p><i>Lessons learned</i> following completion of preconstruction services and MACC negotiation February 2007.</p> <p>Guidelines developed by fourth quarter 2007.</p>	
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